

VIRTUAL QUEUE FOR NETWORK BANDWIDTH  
ALLOCATION TRAFFIC-SHAPING CELL

5

ABSTRACT OF THE DISCLOSURE

A method and a semiconductor intellectual property embodiment of the present invention comprise a class-based queue traffic shaper that enforces multiple service-level  
10 agreement policies on individual connection sessions by limiting the maximum data throughput for each connection. The class-based queue traffic shaper distinguishes amongst datapackets according to their respective source and/or destination IP-addresses. All limit checking is done in one  
15 clock cycle for the entire network hierarchy above a particular node, and previously independent and separate queues are combined into one super queue.